

REMARKS

This application has been amended in a manner to place it in condition for allowance.

Status of the Claims

Claims 9, 16 and 19 are amended.

These claims recite the proportion of the metal compound melting in the range between 100°C and 400°C and of the electrically conducting and/or metallic filler is $\geq 60\%$ by weight, as previously recited in claim 11, and disclosed, for example, in the first full paragraph of page 5. Additionally, these claims are amended to recite the percentage of thermoplastic may be found, for example, in the embodiments discussed beginning at the bottom of page 6, which include 10, 15, 20 and 25 for the thermoplastic. Further, the claims recite copper fiber as the electrically conducting and/or metallic filler, e.g., as described in the second full paragraph of page 5 of the specification.

Claims 14 and 17 are amended to correct the dependency of the claims.

Claim 22 is new, which depends from claim 19, and includes the feature previously recited in claim 18.

No new matter is believed to have been added by the above claim amendments.

Claims 11, 13, 18 and 20 are cancelled.

Claims 9, 12, 14, 16, 17, 19, 21 and 22 remain pending in the application.

Claim Objections

Claim 13 was objected to under 37 CFR 1.75(c) as being an improper dependent claim for being broader than claim 9. Accordingly, the claim has been cancelled.

Claim 19 was objected to for having an incorrect status identifier. Applicants acknowledge with appreciation the Examiner's treating the claim on the merits in the interest of compact prosecution. The present status identifier for claim 19 is now correct (i.e., currently amended).

Therefore, withdrawal of the objection is respectfully requested.

Claim Rejections-35 USC §112

Claims 17 was rejected under 35 U.S.C. § 112, second graph, as being indefinite, for being dependent on a cancelled claim. This rejection is respectfully traversed.

Claim 17 now depends from claim 16.

Therefore, the claim is definite, and withdrawal of the rejection is respectfully requested.

Claim Rejections-35 USC §102

Claims 9, 12-13, 16 and 19-21 were rejected under 35 U.S.C. § 102(b) as anticipated by NAKAZAWA JP 09-241420 ("NAKAZAWA"). This rejection is respectfully traversed.

Independent claims 9, 16 and 19 include a metal/plastic hybrid having 10 to 25% by weight of thermoplastic and $\geq 60\%$ by weight of (i) a metal compound melting in the range between 100°C and 400°C and (ii) copper fiber, which itself is at least 30 to 70% by weight in claims 9 and 16 and between 30 and 70% by weight in claim 19.

NAKAZAWA discloses an amount of 30 to 98% per weight of the resin (see abstract), which is greater than the claimed 10-25%. Consequently, NAKAZAWA suggests as little as 2% of conductive filler. Thus, NKAZAWA fails to disclosed the specific amounts of metal and plastic of the claimed metal/plastic hybrid.

Indeed, the amount of conductive material suggested by NAKAZWA would not be enough to realize the electromagnetic wave shielding effects achieved by the claimed invention. The claimed invention includes a thermoplastic compound with extreme high conductivity that would never be realized with an amount of 2% of conductive filler. Such a high conductivity is neither known nor obvious over NAKAZAWA.

Therefore, claims 9, 16 and 19, and dependent claims 12, 16 and 21 (and new claim 22) are neither anticipated nor

rendered obvious by NAKAZAWA, and withdrawal of the rejection is respectfully requested.

Claims 9, 11-14, 16 and 18-21 were rejected under 35 U.S.C. § 102(b) as anticipated by NAKAGAWA et al. US 20020043398 ("NAKAGAWA"). This rejection is respectfully traversed.

NAKAGAWA discloses a resin with a maximum of 15 Vol% of Copper powder mixed with 40 Vol% of lead free solder.

Accordingly, NAKAGAWA differs from present invention, at the very least, by the fact that NAKAGAWA always a certain amount of copper powder. The claimed invention includes copper fiber in a proportion of at least 30% by weight to 70% by weight.

Thus, NAKAGAWA fails to disclose or suggest the hybrid defined in claims 9, 16, and 19 and dependent claims 14, 16 21 and new claim 22.

Therefore, NAKAGAWA fails to anticipate or render obvious the claimed invention, and withdrawal of the rejection is respectfully requested.

Claims 19 and 21 were rejected under 35 U.S.C. § 102(b) as anticipated by KATSUMATA et al. US 5,554,678 ("KATSUMATA"). This rejection is respectfully traversed.

KATSUMATA is directed to a composition which includes 40-90% thermoplastic synthetic resin.

KATSUMATA differs from present invention, at the very least, in the amount of thermoplastic required, which as claimed is 10-25% by weight. Indeed, KATSUMATA teaches away from approaching these values in that "when the conductive fiber is more than 30 weight %, the moldability deteriorates to result in an uneven dispersion of the fibers, which than cannot provide a practical molded article." (Emphasis added.)

Accordingly, not only does KATSUMATA fail to anticipate the claimed invention, in particular the claimed amount of thermoplastic, KATSUMATA teaches away from approaching the claimed amount of thermoplastic or the amount of copper fiber proportion of between 30% and 70%, and $\geq 60\%$ by weight of (i) a metal compound melting in the range between 100°C and 400°C and (ii) the copper fiber.

Therefore, NAKAGAWA fails to anticipate or render obvious claims 19-22, and withdrawal of the rejection is respectfully requested.

Conclusion

In view of the amendment to the claims and the foregoing remarks, this application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future submissions, to charge any deficiency or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Robert A. Madsen/

Robert A. Madsen, Reg. No. 58,543
209 Madison Street, Suite 500
Alexandria, VA 22314
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

RAM/jr